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ABSTRACT

Recently, behavioral scientists have examined interpersonal manipulation and its effects on individuals, groups, and society. Richard Christie's description of the Machiavellian personality orientation highlights the behaviors of those individuals who are highly successful manipulators of others. Scanning some Machiavellian works for items to tap the construct, a pool of 71 was constructed by Christie and an attempt is made here to investigate the factorial structure of Machiavellianism using the original 71 items. The questionnaire (Mach II) was administered to three student samples; each item scored by a seven point Likert type scale. The aim was on generalizing to a universe of items from a sample of items. An alpha factor analysis yielded a 24 factor solution. Only those factors which accounted for 2 percent of the variance or more were retained; the others were assumed to be inconsequential. Data suggest that the dimensions which Christie assigned a priori to the items in Mach II are not factorially independent nor do the results of the present study approximate such a theoretical point of view. Reasons for the discrepancy in results are postulated. (RC)

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The Factorial Structure of Machiavellianism

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Perhaps no man in history has had the dubious distinction of having his name so intimately associated with cynical, self-serving and amoral manipulation as has Niccolo Machiavelli. His advice to "Princes" has become the bedside reader of tyrants and dictators for four hundred years.

Of late, behavioral scientists have turned their attention to interpersonal manipulation and its effects on individuals, groups and society (Szasz, 1961; Shostram, 1967; Bursten, 1973). A particularly innovative approach to this phenomenon has been developed by Richard Christie. His description of the Machiavellian personality orientation highlights the behaviors of those individuals who are highly successful manipulators of others. A considerable and growing body of literature has examined Machiavellians in a wide variety of contexts, much of it focusing on the outcomes of Machiavellian manipulation (Cf.: Bochner, et. al., 1972; Hacker and Gaitz, 1970; Braginsky, 1966; Bochner and Tucker, 1971). Christie's interest in interpersonal manipulation, his theoretical construct of Machiavellianism and his scale development techniques are detailed in Studies in Machiavellianism (Christie and Geis, 1970).

Christie scanned Machiavelli's The Prince and The Discourse for items which could be used to tap the construct. In addition, other items were added which appeared to relate to the construct, creating a pool of 71 items. Those items made up the sampling universe from which later measures were at least in part derived. Christie's item analysis of the original 71 items used in the Mach II scale demonstrated that only three items failed to discriminate between high and low scores. No factor analysis of Mach II has, to our knowledge, ever been undertaken. The research reported herein is an attempt to investigate the factorial structure of Machiavellianism

using the original 71 items. Since the Mach II items were the sources for later scale development (Mach IV and Mach V), knowledge of the factorial structure among Mach II items could provide insights to both the construct per se and for scale development.

Procedures

The 71-item scale (Mach II) was administered to three separate student samples at three different universities. The samples came from: (a) Kent State University, n = 258, (b) University of Maryland, n = 130, and (c) Marquette University, n = 105.* The total subject sample was 493. The first two schools are presumably similar; large, public, state supported insititutions, while the third, Marquette, is a private, middle-sized institution.

These data were collected during the Fall of 1972. Complete instructions were included with each of the questionnaires to increase uniformity of instruction. Each item was scored using a seven-point Likert type scale.

The major aim of this investigation was not to discover the factor structure for a specific sample of persons. Rather, the focus was on generalizing to a universe of items from a sample of items. In other words, the dimensions which emerge must be useful for generalizing to a universe of all possible items which might be used to evaluate the Machiavellian personality. A statistical technique meeting these requirements has been developed by Kaiser and Caffery (1965) and is called alpha factor analysis. One of the major strengths of alpha factor analysis is that

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*The authors want to acknowledge the cooperation of Mr. Gerald Sargent of Marquette and Dr. Ray Falcione of Maryland, whose help was vital.

it yields a reliable solution in the Kuder-Richardson sense of reliable. It is, then, a uniquely useful tool in mapping an unmapped domain.

Any factor analysis will always produce a set of factor loadings varying in magnitude. The question is how large must a factor loading be to be judged meaningful? One method of answering this question has been to select an arbitrary standard as the basis for judgment, e.g., all factor loadings greater than .30. There is, however, a more objective way to proceed. It is possible to calculate the standard error of the factor loadings (Harmon, 1967, p. 435). Knowing the standard error, we may make an estimate of the minimum factor loading necessary to meet a given level of confidence (Holzinger and Harmon, 1941, p. 121). The level of confidence chosen for this investigation was the .001 level. Following this criteria, the estimated minimum factor loading was .46*.

(It is worth noting that alpha is not without its shortcomings. Not the least of these shortcomings is the amount of computer time necessary to perform the analysis. In our case, for example, the process time required 4 hours, 18 minutes; the I/O time was 30 minutes.)

Results

The alpha analysis yielded a 24 factor solution. Only those factors which accounted for two percent of the variance or more were retained. Factors with less than two percent explained variance were assumed to be inconsequential. The four factors illustrated in table 1 accounted for a total variance of 15.8%. Fourteen items from the original 71 had loadings $\geq .46$. The first factor accounted for 5.17% of the variance

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*We are indebted to Keith I. Wilson of the Bureau of Educational Research at Kent State University for the use of his computer program, BARTEST, to perform these calculations.

and included 4 items, numbers 67, 31, 62, and 55. This factor was labeled "Machiavellian Orientation." Factor II accounted for 4.02% of the variance, and included items 68, 47, 25, and 70. This factor was labeled "View of Morality." Factor III accounted for 4.08% of the variance, and included items 36, 51, 19, and 56. This factor was identified as "Honesty." The last factor accounted for 2.63% of the variance and included two items, 64 and 65. This factor was labeled "Tactics." Note that only four items are common to our solution and the earlier analysis offered by Christie, known as Mach IV.*

Discussion

One important motivation for undertaking this factor analysis was Christie's statement (vis. a vis., his item analysis of Mach II):

> Part-whole correlations were run between individual items and the subscales to which they are arbitrarily assigned. Since no major differences emerged from the comparisons of the part-whole subscale correlations with the item and total scale correlations, it did not seem imperative at the time to do a factor analysis to determine whether these dimensions were in fact factorially independent (Christie, 1970, p. 14).

Our data suggest that the dimensions which Christie assigned a Priori to the items in Mach II are not factorially independent nor do our results approximate such a theoretical point of view. On the other hand, our results are not to be taken as contradictory of Christie's item analysis. Indeed, the two techniques are designed to accomplish different ends.

There may be several reasons why our results do not agree with those of Christie and Geis (1970). One reason may be aberrant sample selection.

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*The complete analysis including all 71 items and their loadings on all 24 factors may be obtained upon request from the senior author.

That is, two of the schools used were large state-supported, public institutions. The third school, however, was a private, middle-sized school. It could be that the public and private schools represent divergent populations. Further, the students who completed our questionnaire were not randomly selected, but were a convenience sample drawn from Speech classes.

Another possibility could be uncontrolled variation in the test situation. Subtle differences could have been introduced into the testing situation via such things as varying sponsorship effects, time of day, or differences of time of administration within the academic term. Furthermore, fifteen years have passed since Christie first reported his scale development research. One final and important qualifier should be noted: the 71 items used in Mach II were created before the potential effects of Social Desirability were noted.

One last point should be raised about the construct of Machiavellianism as it is reflected in the original items developed to identify it: the pool of items did not yield a robust factorial structure. This is not to say that Machiavellianism has no factor structure, but rather the item pool analyzed did not have a factor structure which accounted for any large amount of variance.

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TABLE 1

PRIMARY ITEMS AND FACTOR LOADINGS FOR

THE FOUR FACTORS OF MACH II

	Factors			
ITEM #	I	II	III	IV
**67	58	-17	02	-07
21	53	11	28	-08
62	52	-12	-08	-08
55	48	-20	-12	-07
68	-06	65	-14	13
**47	-02	64	-09	-03
25	-03	49	-05	-22
**70	-35	46	00	-08
36	-02	-05	57	-07
**51	06	10	-50	12
19	04	10	-50	-08
56	08	07	49	06
64	15	15	11	-56
65	05	16	13	-53
%of VARIANCE	5.17	4.02	4.08	2.63
TOTAL VARIANCE		15.89		

* Note: Decimals have been omitted to conserve space.
** These items appear in Mach IV and Mach V.

APPENDIX A

1. VSA 2. SA 3. A 4. N

5. D 6. SD 7. VSD

1. A white lie is often a good thing.
2. Generally speaking, most people do not truly believe in anything new until they have experienced it.
3. If one is morally right, compromise is out of the question.
4. There is no point in keeping a promise if it is to your advantage to break it.
5. Any normal person will stand up for what he thinks is right even if it costs him his job.
6. No one has a right to take his own life.
7. Every time one problem is avoided another arises.
8. Nature has so created men that they desire everything but are unable to attain it.
9. Once a way of handling problems has been worked out it is best to stick with it.
10. Most men like to tackle new and difficult problems.
11. Anyone who completely trusts anyone else is asking for trouble.
12. There is too much of an emphasis upon practical subjects in our schools and not enough attention is paid to the moral teachings of great historical figures.
13. If people could understand one another's position, there would be no good reason for human problems.
14. It is best not to let people think that you like them when you really can't stand them.
15. It is easy to persuade people but it is hard to keep them persuaded.
16. If there is any chance that a recommendation might backfire, be very cautious in recommending anyone.
17. You really can't tell much about a man by the company he keeps.
18. It is a good policy to act as if you are doing things you do because you have no other choice.
19. Most people who get ahead in the world lead clean moral lives.
20. Some of the best people have some of the worst vices.
21. It is safest to assume that all people have a vicious streak and it will come out when they are given a chance.
22. It is foolish to take a big risk unless you are willing to go the limit.
23. The power of one man over another is rarely the result of trickery or force.
24. The world would be in much better shape than it is if people acted upon basic ethical principles.
25. One should take action only when sure it is morally right.
26. The best way to settle an argument is for people to forget their differences of opinion as to what is right and wrong and to compromise on the basis of facts.
27. Humility not only is of no service but is actually harmful.
28. Generally speaking, men won't work hard unless they're forced to do so.
29. It is wise to flatter important people.
30. It is hard to get ahead without cutting corners here and there.
31. People suffering from incurable diseases should have the choice of being put painlessly to death.
32. Even the most hardened and vicious criminal has a spark of decency somewhere within him.
33. Once a decision has been made, it is best to keep changing it as new circumstances arise.
34. Most people don't know what is best for them.
35. Never trust anyone who has a grudge against you.
36. One who deceives will always find those who allow themselves to be deceived.
37. It is best to give others the impression that you can change your mind easily.
38. History teaches no moral lessons; evil and good have always been present.
39. Most men will fight back when insulted.
40. Generally speaking, it is best to say what you think even if it bothers others.

1. VSA 2. SA 3. A 4. N

5. D 6. SD 7. VSD

41. When you come right down to it, it's human nature never to do anything without an eye on one's own advantage.
42. It is better to compromise with existing evils than to go out on a limb in attacking them.
43. A good government should keep the people peaceful and obedient.
44. Most men are brave.
45. The best way to handle people is to tell them what they want to hear.
46. The biggest differences between most criminals and other people is that criminals are stupid enough to get caught.
47. Honesty is the best policy in all cases.
48. Men are quicker to praise than they are to blame.
49. It is better that a hundred criminals go free than one innocent man should be unjustly punished.
50. It is easier to take advantage of someone you love than someone you fear.
51. Barnum was very wrong when he said that there's a sucker born every minute.
52. It is safer to be feared than to be loved.
53. Most people are basically good and kind.
54. Friends should be chosen with an eye toward what they might be able to do for you.
55. Deceit in the carrying on of war is praiseworthy and honorable.
56. The great majority of men are more satisfied with what seems true than with the truth.
57. If a friend asks for advice, it is smart to think about what will happen if your advice backfires.
58. Men resent an injury at the hands of others more than one that is selfinflicted.
59. When you ask someone to do somthing for you, it is best to give the real reasons which might carry more weight.
60. It is possible to be good in all respects.
61. It is not a good idea to bring pressure upon people if you want them to do somethin
62. The most important thing in life is winning.
63. Most men forget more easily the death of their father than the loss of their property.
64. One should upset as few people as possible while making decisions.
65. It is a good working policy to keep on good terms with everyone.
66. Just about anything one does can be justified after it is done.
67. Never tell anyone the real reason you did something unless it is useful to do so.
68. There is no excuse for lying to someone else.
69. The most important thing in history is who won and not how the winning came about.
70. All in all, it is better to be humble and honest than to be important and dishonest.
71. Most people are more concerned with making a good living than with satisfying their conscience.